



SEQUENCE LISTING

<110> University of North Carolina at Chapel Hill
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<120> ISOLATION OF ROC1 AND ROC2

<130> 5470-255

<140> US 09/541,462

<141> 2000-03-21

<160> 41

<170> PatentIn version 3.1

<210> 1

<211> 327

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(324)

<223>

<400> 1

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Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn Ser Gly	
1 5 10 15	
gcg ggc aag aag cgc ttt gaa gtg aaa aag tgg aat gca gta gcc ctc	96
Ala Gly Lys Lys Arg Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu	
20 25 30	
tgg gcc tgg gat att gtg gtt gat aac tgt gcc atc tgc agg aac cac	144
Trp Ala Trp Asp Ile Val Val Asp Asn Cys Ala Ile Cys Arg Asn His	
35 40 45	
att atg gat ctt tgc ata gaa tgt caa gct aac cag gcg tcc gct act	192
Ile Met Asp Leu Cys Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr	
50 55 60	
tca gaa gag tgt act gtc gca tgg gga gtc tgt aac cat gct ttt cac	240
Ser Glu Glu Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His	
65 70 75 80	
ttc cac tgc atc tct cgc tgg ctc aaa aca cga cag gtg tgt cca ttg	288
Phe His Cys Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu	
85 90 95	
gac aac aga gag tgg gaa ttc caa aag tat ggg cac tag	327
Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His	
100 105	

<210> 2

<211> 108

<212> PRT

<213> Homo sapiens

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Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn Ser Gly
1 5 10 15

Ala Gly Lys Lys Arg Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu
20 25 30

Trp Ala Trp Asp Ile Val Val Asp Asn Cys Ala Ile Cys Arg Asn His
35 40 45

Ile Met Asp Leu Cys Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr
50 55 60

Ser Glu Glu Cys Thr Val Ala Trp Gly Val Cys Asn His Ala Phe His
65 70 75 80

Phe His Cys Ile Ser Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu
85 90 95

Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His
100 105

<210> 3

<211> 342

<212> DNA

<213> Homo sapiens

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<221> CDS

<222> (1)..(339)

<223>

<400> 3

atg gcc gac gtg gaa gac gga gag gaa acc tgc gcc ctg gcc tct cac 48
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
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tcc ggg agc tca ggc tca acg tcg gga ggc gac aag atg ttc tcc ctc 96
Ser Gly Ser Ser Gly Ser Thr Ser Gly Gly Asp Lys Met Phe Ser Leu
20 25 30

aag aag tgg aac ccg gtg gcc atg tgg agc tgg gac gtg gag tgc gat 144
Lys Lys Trp Asn Pro Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
35 40 45

acg tgc gcc atc tgc agg gtc cag gtg atg gat gcc tgt ctt aga tgt 192
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
50 55 60

caa gct gaa aac aaa caa gag gac tgt gtt gtg gtc tgg gga gaa tgt 240

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Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
 65 70 75 80
 aat cat tcc ttc cac aac tgc tgc atg tcc ctg tgg gtg aaa cag aac 288
 Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
 85 90 95
 aat cgc tgc cct ctc tgc cag cag gac tgg gtg gtc caa aga atc ggc 336
 Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
 100 105 110
 aaa tga
 Lys 342

<210> 4
 <211> 113
 <212> PRT
 <213> Homo sapiens

<400> 4

Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1 5 10 15

Ser Gly Ser Ser Gly Ser Thr Ser Gly Gly Asp Lys Met Phe Ser Leu
 20 25 30

Lys Lys Trp Asn Pro Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
 35 40 45

Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
 50 55 60

Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
 65 70 75 80

Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
 85 90 95

Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
 100 105 110

Lys

<210> 5
 <211> 33
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<223> Synthetic oligonucleotide primer
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 tttaaagaga aataggatcc catgagcaac gaa 33

<210> 6
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<220>
 <223> Synthetic oligonucleotide primer
 <400> 6
 ttaaagtgtt acggggaatt cattttttca cct 33

<210> 7
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<220>
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 <400> 7
 ggcaatacag attaggatcc tatgaaagtt aaa 33

<210> 8
 <211> 33
 <212> DNA
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<220>
 <223> Synthetic oligonucleotide primer
 <400> 8
 aattgtgatt tctagaattc ttttttatcg taa 33

<210> 9
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<220>
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 <400> 9
 atcccatgg ctatgataac taataagaaa ata 33

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 ctgcagagct cgtaggaaa ggtaatggta ata 33

<210> 11
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<220>
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<400> 11
 atccccatgg ctatgataaa tgagagcgtt tcc 33

<210> 12
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 agctcgtcga cattagtact tgtaagttgc tat 33

<210> 13
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<220>
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<400> 13
 atccccatgg ctatgtcatt tcagattacc cca 33

<210> 14
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<400> 14
 agctcgtcga catcatgagt ttttatgccc att 33

<210> 15
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 <212> PRT
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<220>
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<400> 15

Cys Met Ala Ala Ala Met Asp Val Asp Thr Pro Ser Gly Thr Asn
1 5 10 15

<210> 16

<211> 13

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic peptide

<400> 16

Cys Asp Asn Arg Glu Trp Glu Phe Gln Lys Tyr Gly His
1 5 10

<210> 17

<211> 9

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic peptide

<400> 17

Cys Arg Gln Glu Trp Lys Phe Lys Glu
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<210> 18

<211> 14

<212> PRT

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<220>

<223> Synthetic peptide

<400> 18

Cys Arg Ser Gln Ala Ser Ala Asp Glu Tyr Ser Tyr Val Ala
1 5 10

<210> 19

<211> 60

<212> DNA

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<223> Synthetic oligonucleotide primer

<400> 19

ttctccagtgcgagagaact ttaaagagaa atagttcaac cggatccccg ggtaattaa 60

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<211> 60
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 <212> DNA
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 <212> DNA
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 <400> 22
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 <210> 23
 <211> 60
 <212> DNA
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 <212> DNA
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 <210> 25
 <211> 6

<212> PRT
<213> Homo sapiens

<220>
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<222> (1)..(6)
<223> Partial protein sequence

<400> 25

Lys Asp Val Phe Gln Lys
1 5

<210> 26
<211> 12
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(12)
<223> Partial protein sequence

<400> 26

Lys Ile Phe Leu Glu Asn His Val Arg His Leu His
1 5 10

<210> 27
<211> 8
<212> PRT
<213> Homo sapiens

<220>
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<222> (1)..(8)
<223> Partial protein sequence

<400> 27

Lys Asp Val Phe Glu Arg Tyr Tyr
1 5

<210> 28
<211> 7
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(7)
<223> Partial protein sequence

<400> 28

Lys Val Tyr Thr Tyr Val Ala
1 5

<210> 29
<211> 11
<212> PRT
<213> Homo sapiens

<220>
<221> PEPTIDE
<222> (1)..(11)
<223> Partial protein sequence

<400> 29

Lys Arg Ile Glu Ser Leu Ile Asp Arg Asp Tyr
1 5 10

<210> 30
<211> 82
<212> PRT
<213> Homo sapiens

<220>
<221> SIMILAR
<222> (1)..(82)
<223> Partial protein sequence

<400> 30

Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu Trp Ala Trp Asp Ile
1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Trp
65 70 75 80

Glu Phe

<210> 31
<211> 82

<212> PRT
<213> Drosophila melanogaster

<220>
<221> SIMILAR
<222> (1)..(82)
<223> Partial protein sequence

<400> 31

Phe Glu Val Lys Lys Trp Asn Ala Val Ala Leu Trp Ala Trp Asp Ile
1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Tyr
65 70 75 80

Asp Phe

<210> 32
<211> 82
<212> PRT
<213> Caenorhabditis elegans

<220>
<221> SIMILAR
<222> (1)..(82)
<223> Partial protein sequence

<400> 32

Phe Glu Val Lys Lys Trp Ser Ala Val Ala Leu Trp Ala Trp Asp Ile
1 5 10 15

Gln Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ala Gly Leu Lys Asp Glu Cys Thr
35 40 45

Val Ala Trp Gly Asn Cys Asn His Ala Phe His Phe His Cys Ile Ser

50

55

60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Arg Glu Trp
 65 70 75 80

Glu Phe

<210> 33
 <211> 82
 <212> PRT
 <213> Arabidopsis thaliana
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 <221> SIMILAR
 <222> (1)..(82)
 <223> Partial protein sequence

<400> 33

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 1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Gln Ala Ser Ala Thr Ser Glu Glu Cys Thr
 35 40 45

Val Ala Trp Gly Val Cys Asn His Ala Phe His Phe His Cys Ile Ser
 50 55 60

Arg Trp Leu Lys Thr Arg Gln Val Cys Pro Leu Asp Asn Ser Glu Trp
 65 70 75 80

Glu Phe

<210> 34
 <211> 82
 <212> PRT
 <213> Schizosaccharomyces pombe
 <220>
 <221> SIMILAR
 <222> (1)..(82)
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<400> 34

Phe Glu Ile Lys Lys Trp Asn Ala Val Ala Leu Trp Gln Trp Asp Ile
 1 5 10 15

Val Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Asp Leu Cys
 20 25 30

Ile Glu Cys Gln Ala Asn Thr Asp Ser Ala Ala Ala Gln Glu Cys Thr
 35 40 45

Val Ala Trp Gly Thr Cys Asn His Ala Phe His Phe His Cys Ile Ser
 50 55 60

Arg Trp Leu Asn Thr Arg Asn Val Cys Pro Leu Asp Asn Arg Glu Trp
 65 70 75 80

Glu Phe

<210> 35
 <211> 82
 <212> PRT
 <213> Saccharomyces cerevisiae

<220>
 <221> SIMILAR
 <222> (1)..(82)
 <223> Partial protein sequence

<400> 35

Phe Glu Ile Lys Lys Trp Thr Ala Val Ala Phe Trp Ser Trp Asp Ile
 1 5 10 15

Ala Val Asp Asn Cys Ala Ile Cys Arg Asn His Ile Met Glu Pro Cys
 20 25 30

Ile Glu Cys Gln Pro Lys Ala Met Thr Asp Thr Asp Asn Glu Cys Val
 35 40 45

Ala Ala Trp Gly Val Cys Asn His Ala Phe His Leu His Cys Ile Asn
 50 55 60

Lys Trp Ile Lys Thr Arg Asp Ala Cys Pro Leu Asp Asn Gln Pro Trp
 65 70 75 80

Gln Leu

<210> 36
 <211> 79
 <212> PRT
 <213> Homo sapiens

<220>
 <221> SIMILAR
 <222> (1)..(79)
 <223> Partial protein sequence

<400> 36

Phe Ser Leu Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val
 1 5 10 15

Glu Cys Asp Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys
 20 25 30

Leu Arg Cys Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp
 35 40 45

Gly Glu Cys Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val
 50 55 60

Lys Gln Asn Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val
 65 70 75

<210> 37
 <211> 78
 <212> PRT
 <213> Caenorhabditis elegans

<220>
 <221> SIMILAR
 <222> (1)..(78)
 <223> Partial protein sequence

<400> 37

Phe Val Leu Lys Lys Trp Asn Ala Leu Ala Val Trp Ala Trp Asp Val
 1 5 10 15

Glu Cys Asp Thr Cys Ala Ile Cys Arg Val His Leu Met Glu Glu Cys
 20 25 30

Leu Arg Cys Gln Ser Glu Pro Ser Ala Glu Cys Tyr Val Val Trp Gly
 35 40 45

Asp Cys Asn His Ser Phe His His Cys Cys Met Thr Gln Trp Ile Arg
 50 55 60

Gln Asn Asn Arg Cys Pro Leu Cys Gln Lys Asp Trp Val Val
 65 70 75

<210> 38
 <211> 80
 <212> PRT
 <213> Homo sapiens

<220>
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 <222> (1)..(80)
 <223> Partial protein sequence

<400> 38

Val Lys Ile Lys Cys Trp Asn Gly Val Ala Thr Trp Leu Trp Val Ala
 1 5 10 15

Asn Asp Glu Asn Cys Gly Ile Cys Arg Met Ala Phe Asn Gly Cys Cys
 20 25 30

Pro Asp Cys Lys Val Pro Gly Asp Asp Cys Pro Leu Val Trp Gly Gln
 35 40 45

Cys Ser His Cys Phe His Met His Cys Ile Leu Lys Trp Leu His Ala
 50 55 60

Gln Gln Val Gln Gln His Cys Pro Met Cys Arg Gln Glu Trp Lys Phe
 65 70 75 80

<210> 39
 <211> 80
 <212> PRT
 <213> Drosophila melanogaster

<220>
 <221> SIMILAR
 <222> (1)..(80)
 <223> Partial protein sequence

<400> 39

Val Thr Ile Lys Ser Trp Thr Gly Val Ala Thr Trp Arg Trp Ile Ala
 1 5 10 15

Asn Asp Glu Asn Cys Gly Ile Cys Arg Met Ser Phe Glu Ser Thr Cys
 20 25 30

Pro Glu Cys Ala Leu Pro Gly Asp Asp Cys Pro Leu Val Trp Gly Val
 35 40 45

Cys Ser His Cys Phe His Met His Cys Ile Val Lys Trp Leu Asn Leu
 50 55 60

Gln Pro Leu Asn Lys Gln Cys Pro Met Cys Arg Gln Ser Trp Lys Phe
 65 70 75 80

<210> 40
 <211> 74
 <212> PRT
 <213> Caenorhabditis elegans
 <220>
 <221> SIMILAR
 <222> (1)..(74)
 <223> Partial protein sequence

<400> 40

Ile Thr Val Lys Lys Leu His Val Cys Gly Glu Trp Lys Trp Leu Asp
 1 5 10 15

Thr Cys Gly Ile Cys Arg Met Glu Phe Glu Ser Ala Cys Asn Met Cys
 20 25 30

Lys Phe Pro Gly Asp Asp Cys Pro Leu Val Leu Gly Ile Cys Arg His
 35 40 45

Ala Phe His Arg His Cys Ile Asp Lys Trp Ile Gln Pro Arg Ala Gln
 50 55 60

Cys Pro Leu Cys Arg Gln Asp Trp Thr Ile
 65 70

<210> 41
 <211> 76
 <212> PRT
 <213> Saccharomyces cerevisiae
 <220>
 <221> SIMILAR
 <222> (1)..(76)
 <223> Partial protein sequence

<400> 41

Val Lys Ile Asn Glu Val His Ser Val Phe Ala Trp Ser Trp Asp Val
 1 5 10 15

Cys Gly Ile Cys Arg Ala Ser Tyr Asn Gly Thr Cys Pro Ser Cys Lys

20

25

30

Phe Pro Gly Asp Gln Cys Pro Leu Val Ile Gly Leu Cys His His Asn
35 40 45

Phe His Asp His Cys Ile Tyr Arg Trp Leu Asp Thr Pro Thr Ser Lys
50 55 60

Gly Leu Cys Pro Met Cys Arg Gln Thr Phe Gln Leu
65 70 75